

MAY 02 2005

Substitute PTO/SB/08A (08-03)
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE.

| | | | | | |
|--|---|----|--------------------------|------------------------|--------------------------|
| Substitute for form 1449A/P (Modified) | | | Complete if Known | | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary). | | | Application Number | 10/016,416 | |
| | | | Filing Date | December 10, 2001 | |
| | | | First Named Inventor | BAMDAD, Cynthia C. | |
| | | | Art Unit | 1634 | |
| | | | Examiner Name | LU, Frank Wei Min | |
| Sheet | 1 | of | 7 | Attorney Docket Number | A-67032-2 (463037-00022) |

U.S. PATENT DOCUMENTS

| Examiner Initials* | Cite No. ¹ | Document Number Number-Kind Code ² (if known) | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|--------------------|-----------------------|--|-----------------------------|---|---|
| | A1 * | 4,707,440 | 11-17-1987 | Stavrianopoulos | |
| | A2 * | 4,755,458 | 07-05-1988 | Rabbani et al. | |
| | A3 * | 4,840,893 | 06-20-1989 | Hill et al. | |
| | A4 * | 4,868,103 | 09-19-1989 | Stavrianopoulos et al. | |
| | A5 * | 4,894,325 | 01-16-1990 | Englehardt et al. | |
| | A6 * | 4,994,373 | 02-19-1991 | Stavrianopoulos | |
| | A7 | 5,108,573 | 04-28-1992 | Rubinstein et al. | |
| | A8 | 5,242,828 | 09-07-1993 | Bergstrom et al. | |
| | A9 * | 5,278,043 | 01-11-1994 | Bannwarth et al. | |
| | A10 | 5,294,369 | 03-15-1994 | Shigekawa et al. | |
| | A11 * | 5,391,272 | 02-21-1995 | O'Daly et al. | |
| | A12 | 5,443,701 | 08-22-1995 | Willner et al. | |
| | A13 * | 5,472,881 | 12-05-1995 | Beebe et al. | |
| | A14 | 5,532,128 | 07-02-1996 | Eggers et al. | |
| | A15 * | 5,565,552 | 10-15-1996 | Magda et al. | |
| | A16 * | 5,591,578 | 01-07-1997 | Meade et al. | |
| | A17 | 5,605,662 | 02-25-1997 | Heller et al. | |
| | A18 * | 5,620,850 | 04-15-1997 | Bamdad et al. | |
| | A19 | 5,632,957 | 05-27-1997 | Heller et al. | |
| | A20 | 5,653,939 | 08-05-1997 | Hollis et al. | |
| | A21 | 5,670,322 | 09-23-1997 | Eggers et al. | |
| | A22 * | 5,705,348 | 06-23-1998 | Meade et al. | |
| | A23 | 5,744,305 | 04-28-1998 | Fodor et al. | |
| | A24 | 5,770,369 | 06-23-1998 | Meade et al. | |
| | A25 * | 5,780,234 | 07-14-1998 | Meade et al. | |
| | A26 * | 5,824,473 | 10-20-1998 | Meade et al. | |
| | A27 | 5,952,172 | 09-14-1999 | Meade et al. | |
| | A28 | 6,013,170 | 01-11-2001 | Meade | |
| | A29 | 6,013,459 | 01-11-2001 | Meade | |
| | A30 | 6,063,573 | 05-16-2000 | Kayyem | |
| | A31 | 6,071,699 | 06-06-2000 | Meade et al. | |
| ✓ | A32 | 6,087,100 | 07-11-2000 | Meade et al. | |

| | | | |
|--------------------|----------------------|-----------------|-----------|
| Examiner Signature | <i>Frank Wei Min</i> | Date Considered | 1/22/2005 |
|--------------------|----------------------|-----------------|-----------|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the complete application form to the USPTO. Time will vary depending on the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and selection option 2



Substitute PTO/SB/08A (08-03)

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE.

| | | | | | |
|---|-------------------|----|---|--------------------------|--------------------------|
| Substitute for form 1449 PTO (Modified) INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) | | | | Complete if Known | |
| | | | | Application Number | 10/016,416 |
| | | | | Filing Date | December 10, 2001 |
| | | | | First Named Inventor | BAMDAD, Cynthia C. |
| | | | | Art Unit | 1634 |
| Examiner Name | LU, Frank Wei Min | | | | |
| Sheet | 2 | of | 7 | Attorney Docket Number | A-67032-2 (463037-00022) |

| U.S. PATENT DOCUMENTS | | | | | |
|-----------------------|-----------------------|--|-----------------------------|---|---|
| Examiner Initials* | Cite No. ¹ | Document Number Number-Kind Code ² (if known) | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| w | A33 | 6,090,933 | 07-18-2000 | Kayyem et al. | |
| | A34 | 6,096,273 | 08-01-2000 | Kayyem et al. | |
| | A35 | 6,177,250 | 01-23-2001 | Meade et al. | |
| | A36 | 6,180,352 B1 | 01-30-2001 | Meade et al. | |
| | A37 | 6,200,761 B1 | 03-13-2001 | Meade et al. | |
| | A38 | 6,221,583 B1 | 04-24-2001 | Kayyem et al. | |
| | A39 | 6,232,062 B1 | 05-15-2001 | Kayyem et al. | |
| | A40 | 6,238,870 B1 | 05-29-2001 | Meade et al. | |
| | A41 | 6,248,229 B1 | 06-19-2001 | Meade | |
| | A42 | 6,258,545 B1 | 07-10-2001 | Meade et al. | |
| | A43 | 6,264,825 B1 | 07-24-2001 | Blackburn et al. | |
| | A44 | 6,268,149 B1 | 07-31-2001 | Meade et al. | |
| | A45 | 6,268,150 B1 | 07-31-2001 | Meade et al. | |
| | A46 | 6,277,576 B1 | 08-21-2001 | Meade et al. | |
| | A47 | 6,290,839 B1 | 09-18-2001 | Kayyem et al. | |
| | A48 | 6,479,240 B1 | 11-12-2002 | Kayyem | |
| | A49 | 6,495,323 B1 | 12-17-2002 | Kayyem et al. | |
| | A50 | 6,528,266 B1 | 03-04-2003 | Meade et al. | |
| | A51 | 6,541,617 B1 | 04-01-2003 | Bamdad et al. | |
| | A52 | 6,600,026 B1 | 07-29-2003 | Yu | |
| | A53 | 6,686,150 B1 | 02-03-2004 | Blackburn et al. | |
| | A54 | 6,740,518 B1 | 05-24-2004 | Duong et al. | |
| | A55 | 6,761,816 B1 | 07-13-2004 | Blackburn et al. | |
| | A56 | 2001/0034033 A1 | 10-25-2001 | Meade et al. | |
| | A57 | 2002/0006643 A1 | 01-17-2002 | Kayyem et al. | |
| | A58 | 2002/0009810 A1 | 01-24-2002 | O'Connor et al. | |
| | A59 | 2002/0033345 A1 | 03-21-2002 | Meade | |
| | A60 | 2002/0177135 A1 | 11-28-2002 | Kayyem et al. | |
| | A61 | 2003/0003473 A1 | 01-02-2003 | Kayyem et al. | |
| | A62 | 2003/0148328 A1 | 08-07-2003 | Kayyem et al. | |
| | A63 | 2003/0150723 A1 | 08-14-2003 | Kayyem et al. | |
| ✓ | A64 | 2003/0170677 A1 | 09-11-2003 | Meade et al. | |

| | | | |
|--------------------|--------------|-----------------|-----------------|
| Examiner Signature | <i>W. Lu</i> | Date Considered | <i>12/10/05</i> |
|--------------------|--------------|-----------------|-----------------|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 801.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English Language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the complete application form to the USPTO. Time will vary depending on the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-766-9199) and selection option 2



Substitute PTO/SB/08A (08-03)
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE.

| | | | | | |
|---|---|----|---|--------------------------|--------------------------|
| Substitute for form 1449A/P (Modified) | | | | Complete if Known | |
| | | | | Application Number | 10/016,416 |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) | | | | Filing Date | December 10, 2001 |
| | | | | First Named Inventor | BAMDAD, Cynthia C. |
| | | | | Art Unit | 1634 |
| | | | | Examiner Name | LU, Frank Wei Min |
| Sheet | 3 | of | 7 | Attorney Docket Number | A-67032-2 (463037-00022) |

| U.S. PATENT DOCUMENTS | | | | | |
|-----------------------|-----------------------|---|--------------------------------|---|---|
| Examiner Initials* | Cite No. ¹ | Document Number Number-Kind Code ² (if known) | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| W | A65 | 2003/0232354 A1 | 12-18-2003 | Yu et al. | |
| | A66 | 2004/0053290 A1 | 03-18-2004 | Terbrueggen et al. | |
| | A67 | 2004/0101890 A1 | 05-27-2004 | Meade et al. | |
| | A68 | 2004/0146909 A1 | 07-29-2004 | Duong et al. | |
| | A69 | 2004/0146899 A1 | 07-29-2004 | Kayyem | |
| | A70 | 2005/0003399 A1 | 01-06-2005 | Blackburn et al. | |

| FOREIGN PATENT DOCUMENTS | | | | | | |
|--------------------------|-----------------------|---|--------------------------------|---|---|----------------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document Country Code ² Number ³ Kind Code ⁴ (if known) | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁵ |
| W | B1 | EP 0 142 301 A1 | 05-22-1985 | Serono Diagnostics Limited | | |
| | B2 | EP 0 229 943 A1 | 07-29-1987 | Molecular Biosystems, Inc. | | |
| | B3 | EP 0 238 166 A1 | 09-23-1987 | Mitsubishi Electric Corp. | | |
| | B4 | EP 0 339 821 B2 | 11-02-1989 | United Kingdom Atomic Energy Authority | | |
| | B5 | EP 0 599 337 A1 | 06-01-1994 | Canon K.K. | | |
| | B6 | EP 0 668 502 A2 | 08-23-1995 | Yissum Research Development | | |
| | B7 | WO 86/05815 A1 | 10-09-1986 | Genetics International, Inc. | | |
| | B8 | WO 93/16383 A1 | 08-19-1993 | Scient Generics Ltd. | | |
| | B9 | WO 93/22678 A2/A3 | 11-11-1993 | Massachusetts Institute of Technology | | |
| | B10 | WO 95/15971 A2/A3 | 06-15-1995 | California Institute of Technology | | |
| | B11 | WO 96/40712 A1 | 12-19-1996 | California Institute of Technology | | |
| | B12 | WO 97/27473 A1 | 07-31-1997 | Northwestern University | | |
| | B13 | WO 97/41425 A1 | 11-06-1997 | Pence, Inc. | | |
| | B14 | WO 97/46568 A1 | 12-11-1997 | California Institute of Technology | | |
| | B15 | WO 98/01758 A1 | 01-15-1998 | Nanogen, Inc. | | |
| | B16 | WO 98/04740 A1 | 02-05-1998 | Northwestern University | | |
| | B17 | WO 98/12539 A1 | 03-26-1998 | Meso Scale Technologies, LLC | | |
| | B18 | WO 98/20162 A2/A3 | 05-14-1998 | Clinical Micro Sensors, Inc. | | |

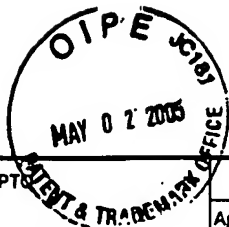
| | | | |
|--------------------|--|-----------------|--|
| Examiner Signature | | Date Considered | |
|--------------------|--|-----------------|--|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the complete application form to the USPTO. Time will vary depending on the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and selection option 2



Substitute PTO/SB/08A (08-03)
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE.

| | | | | | |
|---|---|----|---|--------------------------|--------------------------|
| Substitute for form 1449A/PTO (Modified) | | | | Complete if Known | |
| | | | | Application Number | 10/016,416 |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) | | | | Filing Date | December 10, 2001 |
| | | | | First Named Inventor | BAMDAD, Cynthia C. |
| | | | | Art Unit | 1634 |
| | | | | Examiner Name | LU, Frank Wei Min |
| Sheet | 4 | of | 7 | Attorney Docket Number | A-67032-2 (463037-00022) |

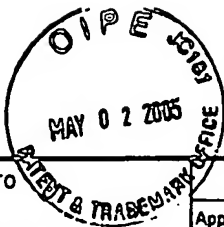
| FOREIGN PATENT DOCUMENTS | | | | | | |
|--------------------------|-----------------------|---|--------------------------------|---|---|----------------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document Country Code ² Number ³ Kind Code ⁴ (if known) | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁴ |
| <i>u</i> | B19 | WO 98/31839 A2/A3 | 07-23-1998 | Presidents & Fellows of Harvard College | | |
| | B20 * | WO 98/35232 A2/A3 | 08-13-1998 | University of North Carolina at Chapel Hill | | |
| | B21 | WO 98/57159 A1 | 12-17-1998 | Clinical Micro Sensors, Inc. | | |
| | B22 | WO 99/37819 A2/A3 | 07-29-1999 | Clinical Micro Sensors, Inc. | | |
| | B23 | WO 99/57319 A1 | 11-11-1999 | Clinical Micro Sensors, Inc. | | |
| | B24 | WO 99/67425 A2/A3 | 12-29-1999 | Clinical Micro Sensors, Inc. | | |
| | B25 | WO 00/16089 A2/A3 | 03-23-2000 | Clinical Micro Sensors, Inc. | | |
| | B26 | WO 00/24941 A1 | 05-04-2000 | Clinical Micro Sensors, Inc. | | |
| | B27 | WO 00/38836 A1 | 07-06-2000 | Clinical Micro Sensors, Inc. | | |
| | B28 | WO 00/62931 A1 | 10-26-2000 | Clinical Micro Sensors, Inc. | | |
| | B29 | WO 01/06016 A2/A3 | 01-25-2001 | Clinical Micro Sensors, Inc. | | |
| | B30 | WO 01/07665 A2/A3 | 02-01-2001 | Clinical Micro Sensors, Inc. | | |
| | B31 | WO 01/35100 A2/A3 | 05-17-2001 | Clinical Micro Sensors, Inc. | | |
| | B32 | WO 01/54813 A2/A3 | 08-02-2001 | Clinical Micro Sensors, Inc. | | |
| | B33 | WO 02/43864 A2 | 06-06-2002 | Clinical Micro Sensors, Inc. | | |
| | B34 | WO 03/085082 A2 | 10-16-2003 | Clinical Micro Sensors, Inc. | | |

| NON PATENT LITERATURE DOCUMENTS | | | | | | |
|---------------------------------|-----------------------|---|--|--|--|----------------|
| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | | | | T ⁴ |
| <i>u</i> | C1 * | AIZAWA, M., et al., "Integrated molecular systems for biosensors," <i>Sens. Actuators B Chem.</i> 24(1&3):1-5 (Mar. 1995). | | | | |
| | C2 * | ALLEMAN, K.S., et al., "Electrochemical rectification at a monolayer-modified electrode," <i>J. Phys. Chem.</i> 100:17050-17058 (Oct. 1996). | | | | |
| | C3 | BAIN, C., et al., "Formation of monolayers by the coadsorption of thiols on gold: variation in the length of the alkyl chain," <i>J. Am. Chem. Soc.</i> 111(18):7164-7175 (Aug. 1989). | | | | |
| | C4 | BEATTIE, K., et al., "Advances in Genosensor Research," <i>Clin. Chem.</i> 41(5):700-706 (1995). | | | | |
| | C5 | BEATTIE, K., et al., "Genosensor Technology," <i>Clin. Chem.</i> 39(4):719-722 (1993). | | | | |
| | C6 * | BIDAN, G., "Electroconducting conjugated polymers: new sensitive matrices to build up chemical or electrochemical sensors. A review," <i>Sens. Actuators B</i> 6:45-56 (1992). | | | | |

| | | | |
|--------------------|---------------|-----------------|------------------|
| Examiner Signature | <i>Sub in</i> | Date Considered | <i>1/22/2005</i> |
|--------------------|---------------|-----------------|------------------|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 801.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the complete application form to the USPTO. Time will vary depending on the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and selection option 2



| | | | | | |
|---|---|----|--------------------------|------------------------|--------------------------|
| Substitute for form 1449A/PTO (Modified) | | | Complete if Known | | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) | | | Application Number | 10/016,416 | |
| | | | Filing Date | December 10, 2001 | |
| | | | First Named Inventor | BAMDAD, Cynthia C. | |
| | | | Art Unit | 1634 | |
| | | | Examiner Name | LU, Frank Wei Min | |
| Sheet | 5 | of | 7 | Attorney Docket Number | A-67032-2 (463037-00022) |

| NON PATENT LITERATURE DOCUMENTS | | | | |
|---------------------------------|-----------------------|---|--|--|
| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | | |
| u | C7 * | BOGUSLAVSKY, L., et al., "Applications of redox polymers in biosensors," <i>Solid State Ionics</i> 60:189-197 (1993). | | |
| | C8 * | BOWLER, B.E., et al., "Long-range electron transfer in donor (spacer) acceptor molecules and proteins," <i>Prog. Inorg. Chem. Bioinorg. Chem.</i> 38:259-322 (1990). | | |
| | C9 | CARTER, M., et al., "Electrochemical investigations of the interaction of metal chelates with DNA. 3. Electrogenated chemiluminescent investigation of the interaction of tris(1,10-phenanthroline)ruthenium(II) with DNA," <i>Bioconjug. Chem.</i> 1(4):257-263 (Jul. - Aug. 1990). | | |
| | C10 * | CHANG, I., et al., "High-driving force electron transfer in metalloproteins: intramolecular oxidation of ferrocyanochrome c by Ru(2,2'-bipy)(im)(His-33) ³⁺ ," <i>J. Am. Chem. Soc.</i> 113(18):7056-7057 (Aug. 1991). | | |
| | C11 * | CHIDSEY, C., et al., "Coadsorption of ferrocene-terminated and unsubstituted alkanethiols on gold: electroactive self-assembled monolayers," <i>J. Am. Chem. Soc.</i> 112(11):4301-4306 (May 1990). | | |
| | C12 * | CHRISEY, L., et al., "Covalent attachment of synthetic DNA to self-assembled monolayer films," <i>Nucleic Acids Res.</i> 24(15):3031-3039 (Aug. 1996). | | |
| | C13 | COLVIN, V., et al., "Semiconductor nanocrystals covalently bound to metal surfaces with self-assembled monolayers," <i>J. Am. Chem. Soc.</i> 114(13):5221-5230 (Jun. 1992). | | |
| | C14 | CYGAN, M., et al., "Insertion, conductivity, and structures of conjugate organic oligomers in self-assembled alkanethiol monolayers on Au(111)," <i>J. Am. Chem. Soc.</i> 120(12):2721-2732 (Apr. 1998). | | |
| | C15 * | DAVIS, L., et al., "Elements of biosensor construction," <i>Enzyme Microbiol. Technol.</i> 17(12):1030-1035 (Dec. 1995). | | |
| | C16 * | DEGANI, Y., et al., "Direct electrical communication between chemically modified enzymes and metal electrodes: 1. Electron transfer from glucose oxidase to metal electrodes via electron relays, bound covalently to the enzyme," <i>J. Phys. Chem.</i> 91(6):1285-1288 (Mar. 1987). | | |
| | C17 | DELAMARCHE, E., et al., "Immobilization of antibodies on a photoactive self-assembled monolayer on gold," <i>Langmuir</i> 12(8):1997-2006 (Apr. 1996). | | |
| | C18 | DONG, S., "Self-assembled monolayers of thiols on gold electrodes for bioelectrochemistry and biosensors," <i>Bioelectrochem. Bioenerg.</i> 42(1):7-13 (1997). | | |
| | C19 | DUAN, C., et al., "Immobilization of proteins on gold coated porous membranes via an activated self-assembled monolayer of thiotic acid," <i>Mikrochim. Acta.</i> 117:195-206 (1995). | | |
| | C20 | DUAN, C., et al., "Separation-free sandwich enzyme immunoassays using microporous gold electrodes and self-assembled monolayer/immobilized capture antibodies," <i>Anal. Chem.</i> 66(9):1369-1377 (May. 1994). | | |
| | C21 * | FRANÇOIS, J.-C., et al., "Periodic Cleavage of Poly(dA) by Oligothymidylates Covalently Linked to the 1,10-Phenanthroline-Copper Complex," <i>Biochemistry</i> 27:2272-2276 (1988). | | |
| | C22 | GAFNI, Y., et al., "Biomimetic Ion-Binding Monolayers on Gold and Their Characterization by AC-Impedance Spectroscopy," <i>Chem. Eur. J.</i> 2(7):759-766 (1996). | | |
| | C23 | HÄUSSLING, L., et al., "Biotin-Functionalized Self-Assembled Monolayers on Gold: Surface Plasmon Optical Studies of Specific Recognition Reactions," <i>Langmuir</i> 7(9):1837-1840 (Sep. 1991). | | |
| ✓ | C24 * | HEGNER, M., et al., "Immobilizing DNA on gold via thiol modification for atomic force microscopy imaging in buffer solutions," <i>FEBS Lett.</i> 336(3):452-456 (Dec. 1993). | | |

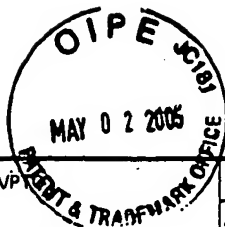
| | | | |
|--------------------|---------------|-----------------|------------------|
| Examiner Signature | <i>Mike m</i> | Date Considered | <i>1/22/2005</i> |
|--------------------|---------------|-----------------|------------------|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the complete application form to the USPTO. Time will vary depending on the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and selection option 2



Substitute PTO/SB/08A (08-03)

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE.

| | | | | | |
|---|---|----|--------------------------|------------------------|--------------------------|
| Substitute for form 1449A/P (Modified) | | | Complete if Known | | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) | | | Application Number | 10/016,416 | |
| | | | Filing Date | December 10, 2001 | |
| | | | First Named Inventor | BAMDAD, Cynthia C. | |
| | | | Art Unit | 1634 | |
| | | | Examiner Name | LU, Frank Wei Min | |
| Sheet | 6 | of | 7 | Attorney Docket Number | A-67032-2 (463037-00022) |

NON PATENT LITERATURE DOCUMENTS

| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
|--------------------|-----------------------|---|----------------|
| <i>W</i> | C25 | HERNE, T.M., et al., "Characterization of DNA Probes Immobilized on Gold Surfaces," <i>J. Am. Chem. Soc.</i> 119(38):8916-8920 (Sep. 1987). | |
| | C26 | IHARA, T., et al., "Gene sensor using ferrocenyl oligonucleotide," <i>Chem. Commun.</i> 17:1609-1610 (1997). | |
| | C27 | KATZ, E., et al., "Application of stilbene-(4,4'-diisothiocyanate)-2,2'-disulfonic acid as a bifunctional reagent for the organization of organic materials and proteins onto electrode surfaces," <i>J. Electroanal. Chem.</i> 354(1&2):129-144 (1993). | |
| | C28 | KATZ, E., et al., "Electrical contact of redox enzymes with electrodes: novel approaches for amperometric biosensors," <i>Bioelectrochem. Bioenerg.</i> 42(1):95-104 (1997). | |
| | C29 | KATZ, E., et al., "Electron Transfer in Self-Assembled Monolayers of N-Methyl-N'-carboxyalkyl-4,4'-bipyridinium Linked to Gold Electrodes," <i>Langmuir</i> 9(5):1392-1396 (May. 1993). | |
| | C30 | KUNITAKE, M., et al., "Interfacial buffer effect of self-assembled monolayers of a carboxylic acid terminated alkanethiol of a gold electrode," <i>J. Chem. Soc. Chem. Commun.</i> 5:563-564 (1994). | |
| | C31 | KUNITAKE, M., et al., "Transmembrane rectified electron transfer through π -conjugated electroactive langmuir-blodgett monolayers on gold electrodes," <i>Bull. Chem. Soc. Jpn.</i> 67(2):373-378 (1994). | |
| | C32 | LI, J., et al., "Viologen-thiol self-assembled monolayers for immobilized horseradish peroxidase at gold electrode surface," <i>Electrochim. Acta</i> 42(6):961-967 (1997). | |
| | C33 | LIEDBERG, B., et al., "Self-Assembly of α -Functionalized Terthiophenes on Gold," <i>J. Phys. Chem. B</i> , Jul. 1997 101(31):5951-5962 (Jul. 1997). | |
| | C34 | LINDHOLM-SETHSON, B., "Electrochemistry at Ultrathin Organic Films at Planar Gold Electrodes," <i>Langmuir</i> 12(13):3305-3314 (Jun. 1996). | |
| | C35 | MANDLER, D., et al., "Applications of self-assembled monolayers in electroanalytical chemistry," <i>Electroanalysis</i> 8(3):207-213 (1996). | |
| | C36 * | MEADE, T.J., "Driving-force effects on the rate of long-range electron transfer in ruthenium-modified cytochrome c," <i>J. Am. Chem. Soc.</i> 111(12):4353-4356 (Jun. 1989). | |
| | C37 * | MEADE, T.J., et al., "Electron Transfer through DNA: site-specific modification of duplex DNA with ruthenium donors and acceptors," <i>Angew Chem. Int. Ed. Engl.</i> 34(3):352-354 (Feb. 1995). | |
| | C38 * | MILLER, C., "Absorbed ω -hydroxy thiol monolayers on gold electrodes: evidence for electron tunneling to redox species in solution," <i>J. Phys. Chem.</i> 95:877-886 (1991). | |
| | C39 | NIWA, M., et al., "Specific binding of concanavalin A to glycolipid monolayers on gold electrodes," <i>J. Chem. Soc. Chem. Commun.</i> 7:547-549 (1992). | |
| | C40 * | PURUGGANAN, M.D., et al., "Accelerated electron transfer between metal complexes mediated by DNA," <i>Science</i> 241(4873):1645-1649 (Sep. 1988). | |
| | C41 | SABATANI, E., et al., "Thioaromatic monolayers on gold: a new family of self-assembling monolayers," <i>Langmuir</i> 9(11):2974-2981 (Nov. 1993). | |
| <i>✓</i> | C42 | SAKAMOTO, S., et al., "Design and synthesis of flavin-conjugated peptines and assembly on a gold electrode," <i>J. Chem. Soc. Perkin Transact. 2</i> 22(11):2319-2326 (1996). | |

| | | | |
|--------------------|--------------------|-----------------|--------------------|
| Examiner Signature | <i>[Signature]</i> | Date Considered | <i>[Signature]</i> |
|--------------------|--------------------|-----------------|--------------------|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 18 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the complete application form to the USPTO. Time will vary depending on the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and selection option 2

MAY 02 2005

Substitute PTO/SB/08A (08-03)

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE.

| | | | | | |
|--|---|----|---|--------------------------|--------------------------|
| Substitute for form 1449A/PTO (Modified) | | | | Complete if Known | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT | | | | Application Number | 10/016,416 |
| | | | | Filing Date | December 10, 2001 |
| | | | | First Named Inventor | BAMDAD, Cynthia C. |
| | | | | Art Unit | 1634 |
| | | | | Examiner Name | LU, Frank Wei Min |
| Sheet | 7 | of | 7 | Attorney Docket Number | A-67032-2 (463037-00022) |

| NON PATENT LITERATURE DOCUMENTS | | | | |
|---------------------------------|-----------------------|---|--|--|
| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | | |
| <i>W</i> | C43 | SMALLEY, J., et al., "Kinetics of Electron Transfer through Ferrocene-Terminated Alanethiol Monolayers Gold," <i>J. Phys. Chem.</i> 99(35):13141-13149 (Aug. 1995). | | |
| | C44 | SMITH, E., et al., "Corticotropin releasing factor induction of leukocyte-derived immunoreactive ACTH and endorphins," <i>Nature</i> 321(6073):881-882 (Jun. 1986). | | |
| | C45 | SMITH, L., et al., "Mapping and Sequencing the Human Genome: How to Proceed," <i>Biotechnology</i> 5:933-942 (1987). | | |
| | C46 | SMITH, L., et al., "The synthesis and use of fluorescent oligonucleotides in DNA sequence analysis," <i>Meth. Enzymol.</i> 155:260-301(1987). | | |
| | C47 | STEINBERG, S., et al., "Ion-Selective Monolayer Membranes Based upon Self-Assembling Tetradentate Ligand Monolayers on Gold Electrodes. 2. Effect of Applied Potential on Ion Binding," <i>J. Am. Chem. Soc.</i> 113(14):5176-5182 (Jul. 1991). | | |
| | C48 | STEINBERG, S., et al., "Ion-Selective Monolayer Membranes Based upon Self-Assembling Tetradentate Ligand Monolayers on Gold Electrodes. 3. Application as Selective Ion Sensors," <i>Langmuir</i> 8(4):1183-1187 (Apr. 1992). | | |
| | C49 * | STORHOFF, J., et al., "One-pot colorimetric differentiation of polynucleotides with single base imperfections using gold nanoparticles probes," <i>J. Am. Chem. Soc.</i> 120(9):1959-1964 (Mar. 1998). | | |
| | C50 | TAKEHARA, K., et al., "An ion-gate response of the cysteine-containing depeptide monolayers formed on a gold electrode. The effects of Alkaline earth ions," <i>Bioelectrochem. Bioenerg.</i> 39(1):135-138 (Feb. 1996). | | |
| | C51 * | UOSAKI, K., et al., "A Self-Assembled Monolayer of Ferrocenylalkane Thiols on Gold as an Electron Mediator for the Reduction of Fe(III)-EDTA in Solution," <i>Electrochem. Acta.</i> 36(11/12):1799-1801 (1991). | | |
| | C52 | WALLACE, J., et al., "Electron Transfer of Yeast Cytochrome C Immobilized On Sam Modified Gold Electrodes", <i>Book of Abstracts, 214th ACS National Meeting</i> , Las Vegas, NV, PHYS-326, American Chemical Society: Washington, DC (September 7-11 1997). | | |
| <i>W</i> | C53 | WILLNER, I., et al., "Photoregulated Binding of Spiropyran-Modified Concanavalin A to Monosaccharid-Functionalized Self-Assembled Monolayers on Gold Electrodes," <i>J. Am. Chem. Soc.</i> 115(11):4937-4938 (Jun. 1993). | | |

| | | | |
|--------------------|-----------------|-----------------|-----------------|
| Examiner Signature | <i>W. M. Lu</i> | Date Considered | <i>1/2/2005</i> |
|--------------------|-----------------|-----------------|-----------------|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the complete application form to the USPTO. Time will vary depending on the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and selection option 2